

PROPOSAL FOR DRAFT AMENDMENTS TO DOCUMENT  
TRANS/WP.29/GRSG/2003/10

(A new draft GTR concerning uniform provisions for  
common definitions and procedures to be used in GTR)

Transmitted by the Expert from the Russian Federation

**A. PROPOSAL**

Annex 2, insert a new paragraph 1.6.:

"1.6. Off-road vehicles - category [ G ]

1.6.1. Definition

Off-road vehicles are considered to be the vehicles of categories [ M and N ] satisfying the requirements of this paragraph, checked under the conditions indicated in paragraphs 1.6.1.1. - 1.6.1.3. below.

1.6.1.1. Vehicles in category [ N1 ] with a maximum mass not exceeding 2 tonnes and vehicles in category [ M1 ] are considered to be off-road vehicles if they have:

- at least one front axle and at least one rear axle designed to be driven simultaneously including vehicles where the drive to one axle can be disengaged,
- at least one differential locking mechanism or at least one mechanism having a similar effect and if they can climb a 30 per cent gradient calculated for a solo vehicle.

In addition, they must satisfy a least five of the following six requirements:

- the approach angle must be at least 25°;
- the departure angle must be at least 20°;
- the ramp angle must be at Least 20°;
- the ground clearance under the front axle must be at least 180 mm;
- the ground clearance under the rear axle must be at least 180 mm;
- the ground clearance between the axles must be at least 200 mm.

1.6.1.2. Vehicles in category [ N1 ] with a maximum mass exceeding 2 tonnes or in category [ N2, M2 or M3 ] with a maximum mass not exceeding 12 tonnes are considered to be off-road vehicles either if all their wheels are designed to be driven simultaneously, including vehicles where the drive to one axle can be disengaged, or if the following three requirements are satisfied:

- at least one front axle and at least one rear axle are designed to be driven simultaneously, including vehicles where the drive to one axle can be disengaged;
- there is at least one differential locking mechanism or at least one mechanism having a similar effect;
- they can climb a 25 per cent gradient calculated for a solo vehicle.

1.6.1.3. Vehicles in category [ M3 ] with a maximum mass exceeding 12 tonnes or in category [ N3 ] are considered to be off-road either if the wheels are designed to be driven simultaneously, including vehicles

where the drive to one axle can be disengaged, or if the following requirements are satisfied: !

- at least half the wheels are driven,
- there is at least one differential locking mechanism or at least one mechanism having a similar effect,
- they can climb a 25 per cent gradient calculated for a solo vehicle;
- at least four of the following six requirements are satisfied:
  - the approach angle must be at least 25°;
  - the departure angle must be at least 25°;
  - the ramp angle must be at least 25°;
  - the ground clearance under the front axle must be at least 250 mm
  - the ground clearance between the axles must be at least 300 mm;
  - the ground clearance under the rear axle must be at least 250 mm.

6.2. Load and checking conditions.

6.2.1. Vehicles in category [ N1 ] with a maximum mass not exceeding two tonnes and vehicles in category [ M1 ] must be in running order, namely with coolant fluid, lubricants, fuel, tools, spare-wheel and a driver considered to weigh a standard 75 kilograms.

6.2.2. The ability to climb the required gradients (25 per cent and 30 per cent) is verified by simple calculation. In exceptional cases, however, the technical services may ask for a vehicle of the type concerned to be submitted to it for an actual test.

6.2.3. When measuring front and rear incidence angles and ramp angles, no account is taken of underrun protective devices.

6.3. Definitions and sketches of front and rear incidence angles, ramp angle and ground clearance.

6.3.1. 'Approach angle' - see Standard ISO 612-1978, term No. 6.10.

6.3.2. 'Departure angle' - see Standard ISO 612:1978, term No. 6.11.

6.3.3. 'Ramp angle' - see Standard ISO 612:1978, term No. 6.9.

6.3.4. 'Ground clearance between the axles' means the shortest distance between the ground plane and the lowest fixed point of the vehicle. Multi-axle bogies are considered to be a single axle.

6.3.5. 'Ground clearance beneath one axle' means the distance beneath the highest point of the arc of a circle passing through the centre of the tyre footprint of the wheels on one axle (the inner wheels in the case of twin tyres) and touching the lowest fixed point of the vehicle between the wheels.

No rigid part of the vehicle may project into the shaded area of the diagram.

Where appropriate, the ground clearance of several axles is indicated in accordance with their arrangement, for example 280/250/250.

6.4. Combined designation.

Symbols [ M and N ] may be combined with symbol [ G ].

**B. JUSTIFICATION**

**Note:** These proposals are based on the Consolidated Resolution on the construction of vehicles R.E.3) - document TRANS/WP.29/78/Rev.1/Amend.2, Annex 7/Rev.2.